

What are VOCs?

Volatile Organic Compounds (VOCs) are chemicals that easily enter the air as gases from some solids or liquids. They are ingredients in many commonly used products and are in the air of just about every indoor setting.

Routes of Exposure

When you use a product containing VOCs indoors, the levels of these chemicals in the air increase, and they decrease over time after you stop using them.

- Products containing VOCs can release chemicals when they are used and stored.
- Building materials and furnishings, such as new carpet or furniture, slowly release VOCs over time.
- VOCs can get into indoor air from contaminated soils and groundwater under buildings through a process known as vapor intrusion.
- Vapors can enter your home through open windows and nearby vents if VOC-containing products are being used outdoors near your home.

The amount of time a chemical stays in the air depends on how quickly fresh air enters the room and the amount of chemical used. Levels of VOCs will decrease faster if you open windows or doors, or use exhaust fans.

Health Effects and Concerns

People come into contact with VOCs by breathing, swallowing, or touching. This is referred to as exposure. Whether or not a person will have health effects after exposure to VOCs depends on:

- The toxicity of the chemical (how much harm can be caused by contact with the chemical).
- How much of the chemical is present.
- How long and how often a person is exposed.
- Differences in age, current health conditions, gender, and exposure to other chemicals.

Short-term exposure to high levels of some VOCs can cause headaches, dizziness, light-headedness, drowsiness, nausea, and eye and respiratory irritation. These effects usually go away after the exposure stops. In laboratory animals, long-term exposure to high levels of some VOCs has caused cancer and

affected the liver, kidneys, and nervous system. Ecology recommends minimizing exposure to all toxic chemicals, whenever possible.

Here are some steps to reduce VOCs indoors:

- Find out if products used or stored in your home contain VOCs. Information about chemicals in many household products is listed on the [National Institute of Health's website](#).
- If you must store products containing VOCs, do so in tightly sealed, original containers in a secure and well-ventilated area. If possible, store products in places where people do not spend much time, such as a garage or outdoor shed. Better yet, buy these products only as needed and in amounts that are used up quickly.
- Dispose of unneeded products containing VOCs. Many of these products are considered household hazardous wastes and should be disposed of at special facilities or during special household hazardous waste collection events in your area.
- Use products containing VOCs in well-ventilated areas or outdoors. Open windows and doors or use an exhaust fan to increase ventilation. Repeated or prolonged ventilation may be necessary for reducing levels from building materials (new carpeting or furniture) that release VOCs slowly over time.
- Carefully read labels and follow directions for use.